# PATENT ABSTRACTS OF JAPAN

(11)Publication number: 63-195288(43)Date of publication of application: 12.08.1988

C25B 1/00

TO MINISTER STATE OF THE STATE

(21)Application number: 62-027244 (71)Applicant: TOSOH CORP

(22)Date of filing: 10.02.1987 (72)Inventor: OGAWA NOBUHIRO

### (54) PRODUCTION OF METAL HYDROXIDE

## (57) Abstract:

(51)Int.Cl.

PURPOSE: To easily and efficiently produce the title high-purity and fine metal hydroxide at a low cost, by carrying out electrolysis in an electrolytic cell having a diaphragm with a metal as the anode and an. aq. soln. of an org. acid as the electrolyte, and neutralizing the formed soln. of a metal ion.

CONSTITUTION: In the electrolysis of a transition metal, etc., a metal incapable of being passivated is used as the anode, and a cathode of Ti, is arranged in the electrolytic cell across the diaphragm. Electrolysis is carried out in the cell with an aq. soln. of an org. acid such as acetic acid as the electrolyte. A fluorine-based anion-exchange membrane is preferably used as the diaphragm to control a leak of the metal ion, etc., into the cathode chamber. An appropriate salt such as ammonium acetate is preferably added to the electrolyte in the cathod chamber. The anolde metla is dissolved by the electrolysis, and a soln. of the metal ion is formed. The soln. of the metal ion is neutralized by a neutralizer such as ammonia, a pricipitant such as urea is added, as required, and a precipitate of the metal hydroxide is obtained. The precipitate is dried, if necessary, by a spray drier, etc., and metal hydroxide powder is obtained.

### PRODUCTION OF METAL HYDROXIDE

Publication number: JP63195288 (A)

**Publication date:** 

1988-08-12

Inventor(s):

OGAWA NOBUHIRO +

Applicant(s):

TOSOH CORP +

Classification:

- international:

C25B1/00; C25B1/00; (IPC1-7): C25B1/00

- European:

Application number: JP19870027244 19870210 Priority number(s): JP19870027244 19870210

#### Abstract of JP 63195288 (A)

PURPOSE:To easily and efficiently produce the title high-purity and fine metal hydroxide at a low cost, by carrying out electrolysis in an electrolytic cell having a diaphragm with a metal as the anode and an. aq. soln. of an org. acid as the electrolyte, and neutralizing the formed soln. of a metal ion. CONSTITUTION:In the electrolysis of a transition metal, etc., a metal incapable of being passivated is used as the anode, and a cathode of Ti, is arranged in the electrolytic cell across the diaphragm. Electrolysis is carried out in the cell with an aq. soln. of an org. acid such as acetic acid as the electrolyte. A fluorine-based anion-exchange membrane is preferably used as the diaphragm to control a leak of the metal ion, etc., into the cathode chamber. An appropriate salt such as ammonium acetate is preferably added to the electrolyte in the cathod chamber. The anolde metla is dissolved by the electrolysis, and a soln, of the metal ion is formed. The soln, of the metal ion is neutralized by a neutralizer such as ammonia, a pricipitant such as urea is added, as required, and a precipitate of the metal hydroxide is obtained. The precipitate is dried, if necessary, by a spray drier, etc., and metal hydroxide powder is obtained.

Data supplied from the espacenet database — Worldwide

```
ANSWER 1 OF 1 CAPLUS COPYRIGHT 2010 ACS on STN
AN 1988:639283 CAPLUS <u>Full-text</u>
     109:239283
OREF 109:39447a,39450a
ED Entered STN: 24 Dec 1988
ΤI
   Manufacture of a high-purity and fine metal hydroxide
IN Ogawa, Nobuhiro
   Tosoh Corp., Japan
PA
    Japan Kokai Tokkyo Koho, 7 pp.
SO
     CODEN: JKXXAF
\mathsf{D}\mathbf{T}
     Patent
LA
    Japanese
   72-7 (Electrochemistry)
    Section cross-reference(s): 49, 76
FAN.CNT 1
                       KIND
                                           APPLICATION NO.
                                                                  DATE
    PATENT NO.
                               DATE
PI JP 63195288
                     А
                                           JP 1987-27244
                               19880812
19870210 <--
PRAI JP 1987-27244
                                19870210
CLASS
PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES
JP 63195288
               IPCI
                      C25B0001-00 [ICM, 4]
                IPCR C25B0001-00 [I,C*]; C25B0001-00 [I,A]
AΒ
     The title method involves dissolving a metal (anode), e.g., In, in
     a membrane-divided cell containing an aqueous solution of an % \left( 1\right) =\left( 1\right) 
     organic acid (e.g., HCOOH) to form metal ions, and neutralizing
     the ions. The hydroxide is useful for electroceramics.
```

```
ANSWER 1 OF 1 WPIX COPYRIGHT 2010
                                        THOMSON REUTERS on STN
AN 1988-267785 [198838] WPIX Full-text
    C1988-119285 [199321]
    Fine-grained high purity metal hydroxide preparation - using
electrolytic cell
     containing aqueous organic acid solution in which anode metal
dissolves and
     neutralising
DC.
     E37; J03
IN
    OGAWA N
PΑ
     (TOYJ-C) TOYO SODA MFG CO LTD
CYC 1
                   A 19880812 (198838) * JA 7[1]
PI JP 63195288
<--
ADT
                 JP 1987-27244 19870210
PRAI JP 1987-27244
                         19870210
IPCR C25B0001-00 [I,A]; C25B0001-00 [I,C]
FCL C25B0001-00 Z
FTRM 4K021; 4K021/AB25; 4K021/BA10; 4K021/BC09; 4K021/DB18; 4K021/DB36
     JP 63195288 A UPAB: 20060105
     In an electrolytic cell equipped with a metal anode and a cathode
     separated by a diaphragm, organic acid aqueous solution is used in
     the electrolysis to form a metal ion solution by dissolution of
     the anode metal, and then neutralised.
           USE/ADVANTAGE - For mfg. fine-grained high-purity metal
     hydroxides. - In an example, a 20% formic acid aqueous solution
     was electrolysed in an electrolytic cell with an In anode and a Pt
     cathode separated by a 'SF-34' (RTM), an F-based anion exchange
     membrane diaphragm, under a current density of 3 A/dm2 at 25 deg.c,
     to give 0.5 micron. In hydroxide particles containing impurities
     beyond the detection of ICP analysis.
FS
     CPI
     CPI: E35; E35-F; J03-B
MC
```